

Leapfrog Group Resource Utilization Measure Specifications – Special Care and Deliveries

	COMPONENT METRIC 2	COMPONENT METRIC 3
DESCRIPTION	Severity-Standardized ALOS – Special Care	Severity-Standardized ALOS – Deliveries
NUMERATOR	Number of accommodation days in Special Care hospital units (e.g., intensive care units) for discharges in the denominator	Total LOS for admission in the denominator
DENOMINATOR	<p>Number of inpatient hospital discharges (for respective condition)</p> <p><u>Inclusions:</u></p> <ol style="list-style-type: none"> 1. Global time period = Cases with discharge dates falling within six-month measurement time period 2. Cases meeting global Clinical Criteria for AMI, CABG, PCI, or Pneumonia, respectively 3. Patients aged 18-64 years at admission 4. Primary source of payment = private/commercial health insurance plan 5. Cases with Special Care accommodation Days 0 or more, whole number values, defined by UB-92 revenue codes <p><u>Exclusions:</u></p> <ol style="list-style-type: none"> 1. Patient birthdate missing or invalid 2. Cases where accommodation revenue codes are missing or all-inclusive reimbursement rate applies to the case 3. Cases where Routine plus Special accommodation Days exceed overall LOS 	<p>Number of inpatient hospital discharges</p> <p><u>Inclusions:</u></p> <ol style="list-style-type: none"> 1. Global time period = Cases with discharge dates falling within six-month measurement time period 2. Cases meeting global Clinical Criteria for Deliveries (mothers). 3. Patients aged 18-64 years at admission (mothers). 4. Primary source of payment = private/commercial health insurance plan <p><u>Exclusions:</u></p> <ol style="list-style-type: none"> 1. Patient birthdate missing or invalid

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DATA SOURCE	UB-92 claims with revenue code detail and count of accommodation units, or similar administrative/financial datasets	UB-92 claims with revenue code detail and count of accommodation units, or similar administrative/financial datasets
DATA ELEMENT DEFINITIONS AND ALLOWABLE VALUES	<p>Accommodation Days (Special Care)</p> <ol style="list-style-type: none"> Defined by UB-92 revenue codes (see Table 2) Days may be 0 or greater, whole numbers only <ul style="list-style-type: none"> Admission Date: valid date Birthdate: valid date, prior to Admission Date Discharge Date: valid date, on or after Admission Date ICD-9-CM Principal Diagnosis Code: valid code (see Inclusion / Exclusion tables) ICD-9-CM Principal Procedure Code: valid code (see Inclusion / Exclusion tables) ICD-9-CM Other Diagnosis Codes: valid code (see Inclusion / Exclusion tables) ICD-9-CM Other Procedure Codes: valid code (see Inclusion / Exclusion tables) Primary Source of Payment Sex of Patient UB-92 Revenue Codes 	<p>Total LOS = Discharge Date less Admission Date (i.e., count day of admission but not day of discharge, except 1 day LOS if Admission Date = Discharge Date)</p> <p>This includes only the mother’s stay for the Delivery, regardless of the baby’s stay</p> <ul style="list-style-type: none"> Admission Date: valid date Birthdate: valid date, prior to Admission Date Discharge Date: valid date, on or after Admission Date ICD-9-CM Principal Diagnosis Code: valid code (see Inclusion / Exclusion tables) ICD-9-CM Principal Procedure Code: valid code (see Inclusion / Exclusion tables) ICD-9-CM Other Diagnosis Codes: valid code (see Inclusion / Exclusion tables) ICD-9-CM Other Procedure Codes: valid code (see Inclusion / Exclusion tables) Primary Source of Payment
RISK-ADJUSTMENT	“For each clinical condition (routine or special care) or for Deliveries, a hospital’s ALOS is adjusted for the expected impact of	

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<p>METHOD AND ASSOCIATED DATA ELEMENTS</p>	<p>differences in case severity between hospitals in the six-month period for which measures are reported.</p> <p>Severity adjustment algorithms and data collection mechanisms are designed to parallel the approach taken by the Joint Commission for its risk-adjusted National Hospital Quality Measures (e.g., AMI mortality) though the models themselves differ given that the dependent variables would be expected to vary differently based on different underlying factors associated with routine/special care days for these cases.</p> <p>These algorithms are based on logistic regression models developed by Thomson Medstat and described in program documentation made publicly available by The Leapfrog Group. Risk factors include a set of clinical, demographic, and other factors which (a) can be identified from standard UB-92 data sources and (b) appear to be clinically relevant and most significant and material in explaining variation in the dependent variable – routine/special care ALOS (or total ALOS for Deliveries).</p> <p>The severity-adjustment algorithms consist of a set of statistical coefficients associated with each of several risk factors that represent the estimated contribution (+ or -) to an expected LOS (routine/special care) for each case based on presence of that factor for the case. (For Deliveries, total expected LOS is used, not routine or specialty-care.) The hospital’s National Hospital Quality Measures data vendor accumulates coefficients for factors applicable to each case included in the ALOS metrics reported, and computes and reports average expected LOS for those cases, by each clinical area reported for the hospital. Counts of cases by risk factor are also reported by the vendor for statistical quality control by Leapfrog.</p> <p>In the semi-annual aggregation of data, these expected lengths of stay are re-indexed to an overall severity index of 1.000 representing the overall predicted LOS across all hospitals reporting for that period within that clinical area (or for Deliveries), and each hospital’s severity index is computed based on this re-indexing.</p>	

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	<p>For each clinical condition, routine/special-care ALOS (or total ALOS for Deliveries) is standardized for the likely impact that differences in case severity are expected to influence those averages:</p> <p>Standardized ALOS = ALOS divided by Severity Index</p> <p>This standardizes all hospital's ALOS to a common and directly comparable severity index of 1.000.</p> <p>The severity models are publicly available and non-proprietary, though they remain the copyrighted property of The Leapfrog Group. ” (see Attachment D for full specification and description of models development.)</p>	
ADJUSTMENT VARIABLES	<p>For each clinical condition, ALOS is adjusted for patient characteristics across healthcare organizations. Risk factors include a patient's demographic characteristics (age and gender), comorbidities, and case severity within that clinical condition at the time of healthcare encounters.</p> <p>Regression models were developed to adjust for these risk factors to allow fair and accurate comparisons across hospitals.</p>	